

AMENDMENTS TO THE SPECIFICATION

Before page 1, line 1, please insert the following:

This application claims priority of Japanese Application No. 2000-198915, filed June 30, 2000, the entire contents of which are hereby incorporated by reference.

Please amend the paragraph starting at page 1, line 16, as follows:

A variety of processes for producing such color filter ~~array~~ arrays have been proposed. Among them, the so-called "color resist method" is in wide practical use. In the color resist method, the patterning is effected by exposing a photosensitive resin composition comprising colorants to light and developing, and the patterning is repeated in sequence ~~in~~ for the required number of times.

Please amend the two paragraphs at page 3, lines 10-19, as follows:

The ~~present~~ invention provides a color filter array having a blue filter layer on a substrate wherein the blue filter layer comprises a triallylmethane dye (hereinafter, referred to as "dye (I)") showing its absorption maximum at a wavelength within the range of from 550 to 650 nm; and has a transmittance at a wavelength of 450 nm of 70% or more and that at 650 nm of 5% or less.

The ~~present~~ invention also provides a process for producing the color filter array.

Please amend page 5, line 1 as follows:

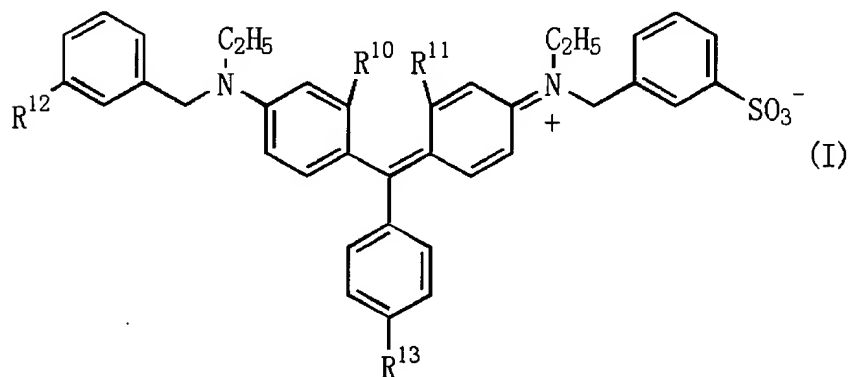
~~Embodiment of the Invention~~ Detailed Description

Please amend the paragraph starting at page 5, line 7, as follows:

The color filter array of the ~~present~~ invention has a blue filter layer on its substrate.

Please amend the paragraph starting at page 5, line 9, as follows:

Examples of the dye (I) include compounds represented by the general formula (I):



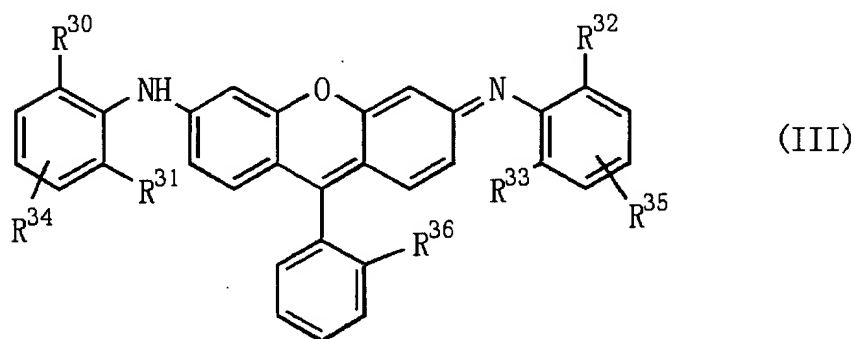
wherein R¹⁰ and R¹¹ each independently represents a hydrogen atom or an alkyl group having 1 to 3 carbon atoms; R¹² represents a hydrogen atom or a sulfonic acid group; and R¹³ represents a hydrogen atom, a sulfonic acid group, a carboxylic acid group, an alkyl group having 1 to 3 carbon atoms, an alkoxyl group having 1 to 3 carbon atoms, or a group represented by the general formula (1):



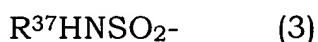
wherein R¹⁴ and R¹⁵ each independently represents a hydrogen atom, a phenyl group, an alkyl group having 1 to 3 carbon atoms, or a phenyl group substituted at the p-position with an alkoxyl group having 1 to 3 carbon atoms; and salts thereof.

Please amend the paragraph starting at page 11, line 7, as follows:

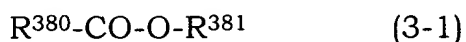
Examples of the dye (III) include compounds represented by the general formula (III):



wherein R^{30} , R^{31} , R^{32} , and R^{33} each independently represents a hydrogen atom or an alkyl group having 1 to 3 carbon atoms; and R^{34} , R^{35} , and R^{36} each independently represents a sulfonic acid group or a group represented by the general formula (3):

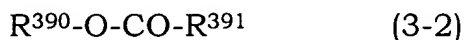


wherein R^{37} represents an alkyl group having 2 to 20 carbon atoms, a cyclohexylalkyl group wherein the alkyl chain has 2 to 12 carbon atoms, an alkylcyclohexyl group wherein the alkyl chain has 1 to 4 carbon atoms, an alkyl group which has 2 to 12 carbon atoms and is substituted with an alkoxy group having 2 to 12 carbon atoms ~~atoms and,~~ atoms, and an alkylcarboxylalkyl group represented by the general formula (3-1):



wherein R^{380} represents an alkyl group having 2 to 12 carbon atoms, and R^{381} represents an alkylene group having 2 to 12 carbon atoms,

an alkyloxycarbonylalkyl group represented by the general formula (3-2):



wherein R^{390} represents an alkyl group having 2 to 12 carbon atoms, and R^{391} represents an alkylene group having 2 to 12 carbon atoms,

a phenyl group substituted with an alkyl group having 1 to 20 carbon atoms, or an alkyl group which has 1 to 20 carbon atoms and is substituted with a phenyl group; and salts thereof.

Please amend the paragraph starting at page 14, line 15, as follows:

The color filter array of the ~~present~~ invention can be produced by an ordinary color resist method. For example, it can be produced by a process comprising the step of patterning a photosensitive resin composition ~~comprising~~ containing colorants. The photosensitive resin composition ~~comprises~~ contains the dye (I). The amounts of the dye (I) ~~comprised~~ contained in the photosensitive resin composition is the same as those in the desired blue filter layer. If the blue filter layer is desired to ~~comprise~~ contain other dyes, for example, the dye (II) and the dye (III), a photosensitive resin composition ~~comprising~~ containing the dye (II) and the dye (III) is employed. The amounts of the dye (II) and the dye (III) ~~comprised~~ contained in the photosensitive resin composition are the same as those in the desired blue filter layer. The transmittance of the blue filter layer after the patterning is 70% or more at 450 nm and 5% or less at 650 nm.

Please amend the paragraph starting at page 15, line 6, as follows:

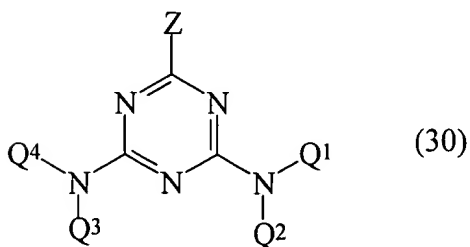
The positive photosensitive resin composition of the ~~present invention~~ ~~comprises,~~ invention contains, for example, a photoactive compound and an alkali-soluble resin in addition to the above-described dyes.

Please amend the paragraph starting at page 15, line 10, as follows:

A photoactive compound used in conventional photosensitive resin compositions can be used in the positive photosensitive resin composition of the ~~present invention~~. Examples thereof include esters of phenolic compounds with o-naphthoquinonediazide sulfonates. Examples of the phenolic compounds include compounds represented by the chemical formula (10).

Please amend the paragraph starting at page 16, line 24, as follows:

As the curing agent, usually, a heat curing agent which is cured through heating is employed. Examples of the heat curing agent include compounds represented by the general formula (30):



wherein Q¹, Q², Q³, and Q⁴ each independently represents a hydrogen atom, a hydroxyalkyl group having 1 to 4 carbon atoms, or an alkyl group having 1 to 4 carbon atoms and substituted with an alkoxyl group having 1 to 4 carbon atoms; Z represents a phenyl group or a group represented by the general formula (31):



wherein Q⁵ and Q⁶ each independently represents a hydrogen atom, a hydroxyalkyl group having 1 to 4 carbon atoms, or an alkyl group having 1 to 4 carbon atoms and substituted with an alkoxyl group having 1 to 4 carbon atoms with the proviso that at least one of Q¹ to Q⁶ is a hydroxyalkyl group having 1 to 4 carbon atoms or an alkyl group having 1 to 4 carbon atoms and substituted with an alkoxyl group having 1 to 4 carbon atoms.

Please amend the paragraph starting at page 23, line 6, as follows:

The amounts of the photo acid generator, curing agent, and alkali-soluble resin comprised in the negative photosensitive resin composition per a total of 100 parts by weight of the dyes, photoreactive acid generator, curing agent, and alkali-soluble resin are as ~~follow~~- follows. The content of the dyes is usually about 15 to 40 parts by weight, and that of the photo acid generator is usually 0.3 to 5 parts by weight. The amount of the curing agent to be used is usually 10 to 25 parts by

weight, and the content of the alkali-soluble resin is usually 20 to 75 parts by weight.

Please amend the paragraph starting at page 24, line 19, as follows:

Thereafter, the coat is exposed to light. The exposure to light involves the use of a mask pattern corresponding to the desired pattern, and is effected by irradiating the coat with a beam through the mask pattern. As the beam for the exposure of the coat to light, for example, a g-ray, an i-ray, or the like can be employed. Such ~~an~~ exposure equipment as ~~the~~ a g-ray stepper or an i-ray stepper may be employed for the exposure. When a negative photosensitive resin composition is used, the coat is heated after the exposure to light. When the positive photosensitive resin composition is used, the coat may be heated after the exposure or may not be heated. On heating the coat, the heating temperature is, for example, about 80 to 150°C.

Please amend the paragraph starting at page 25, line 4, as follows:

After having been exposed to light, the coat is subjected to development. The development is effected by immersing the substrate provided with the coat in a developer, as in the case of the use of an ordinary photosensitive resin composition. Developer used for patterning conducted by using a conventional

photosensitive resin composition can also be employed ~~in~~ for patterning in the ~~present~~ invention. A color filter array having a blue filter layer defined in the desired pattern can be obtained by taking the substrate out of the developer and then washing with water to remove the developer.

Please amend the paragraph starting at page 27, line 13, as follows:

Hereinafter, the ~~present~~ invention will be described in more detail based on Examples, but these should by no means be construed as defining the scope of the present invention.

Please amend the paragraph starting at page 30, line 7, as follows:

A coat was formed by applying the negative photosensitive resin composition obtained above onto a substrate (silicon wafer) by spin coating and heating at 100°C for 1 minute to evaporate ethyl lactate therefrom. The coat had been exposed to light by irradiation of i-ray through a mask pattern using an exposure equipment ("Nikon NSR i7A" manufactured by Nikon Corp.), followed by ~~heated~~ heating at 120°C for 1 minute. Then, the pattern was developed by immersing the coated substrate in a developer ("SOPD" manufactured by Sumitomo Chemical Co., Ltd.) at 23°C for 1 minute. After the development, the substrate was washed with water, dried, irradiated with ultraviolet rays, and heated to 180°C for 3

minutes to give a color filter array having a blue filter layer in a striped-pattern.

The blue filter layer has a line width of 1.0 μm and a thickness of 1.5 μm .